50th Annual Fuze Conference

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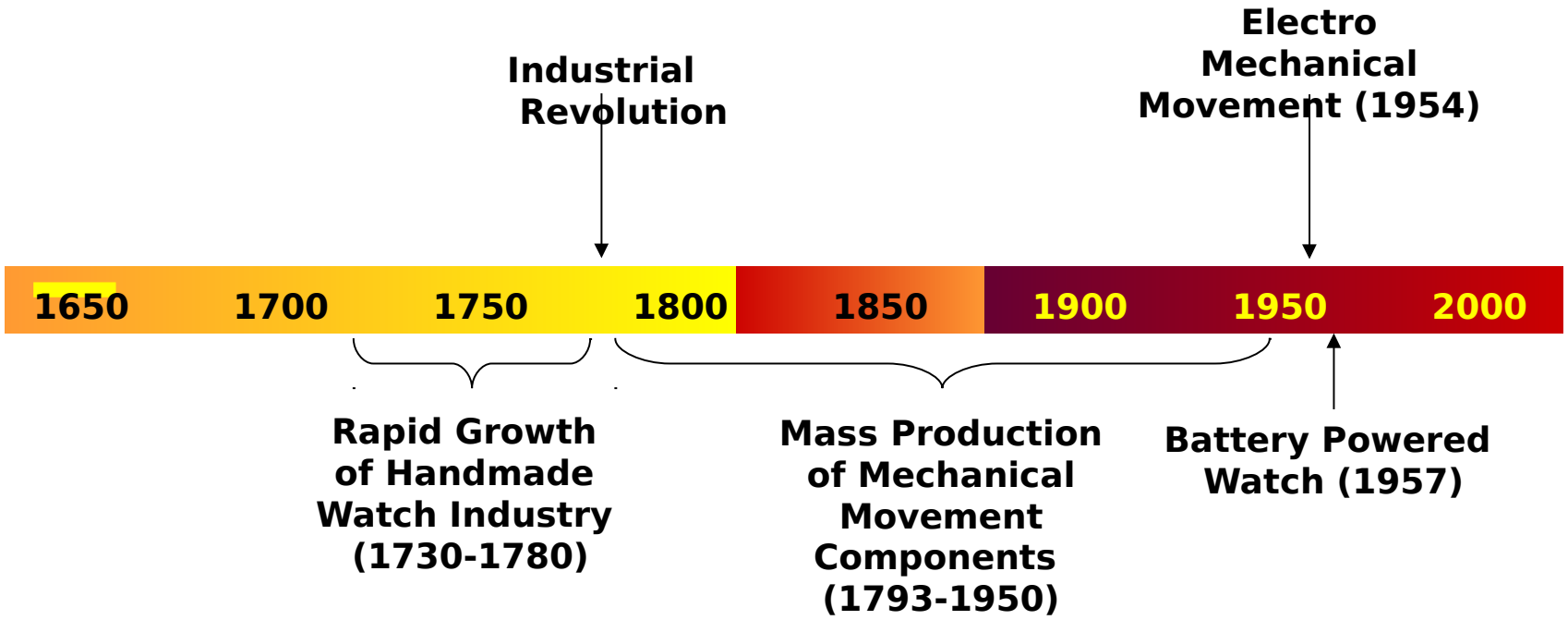
History of the Swiss Watch Industry



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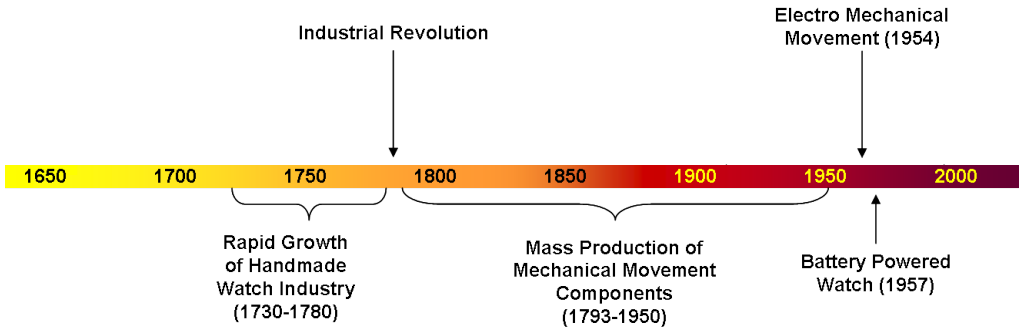
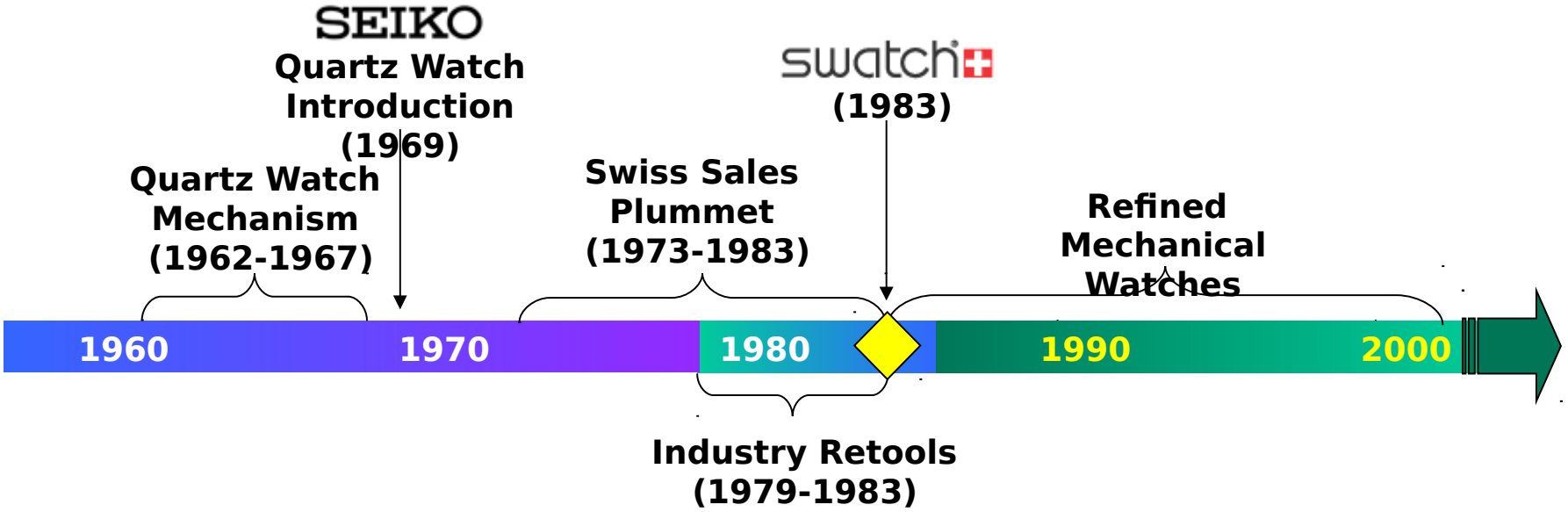




History of the Swiss Watch Industry

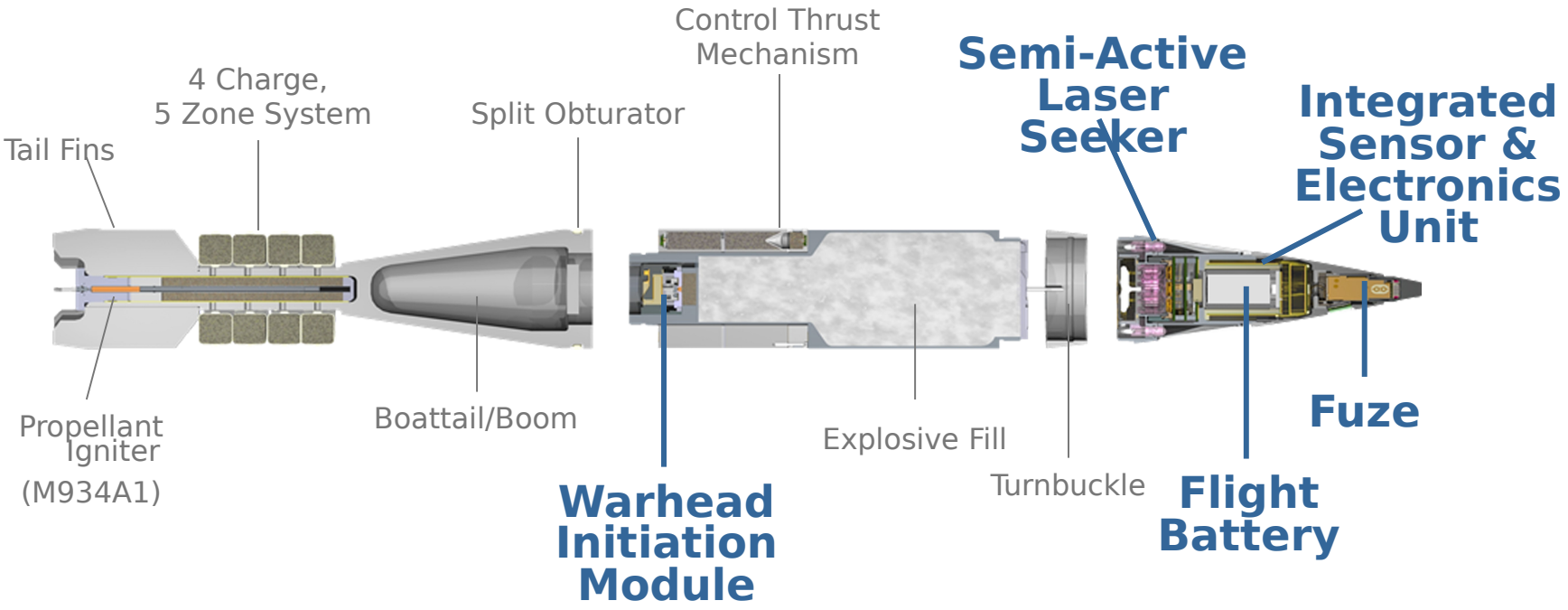
Mechanical Era

Electronic Era

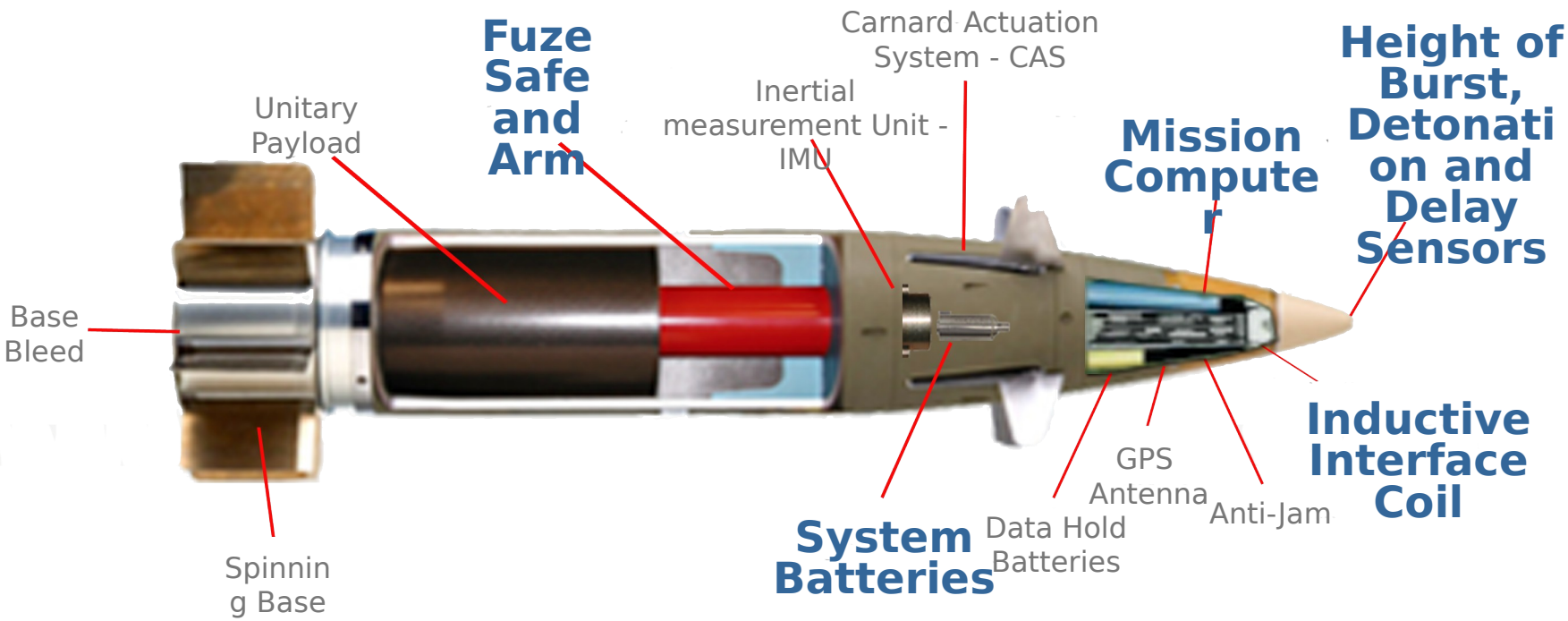
Integrated Era

1750 1800 1850 1900 1950 2000

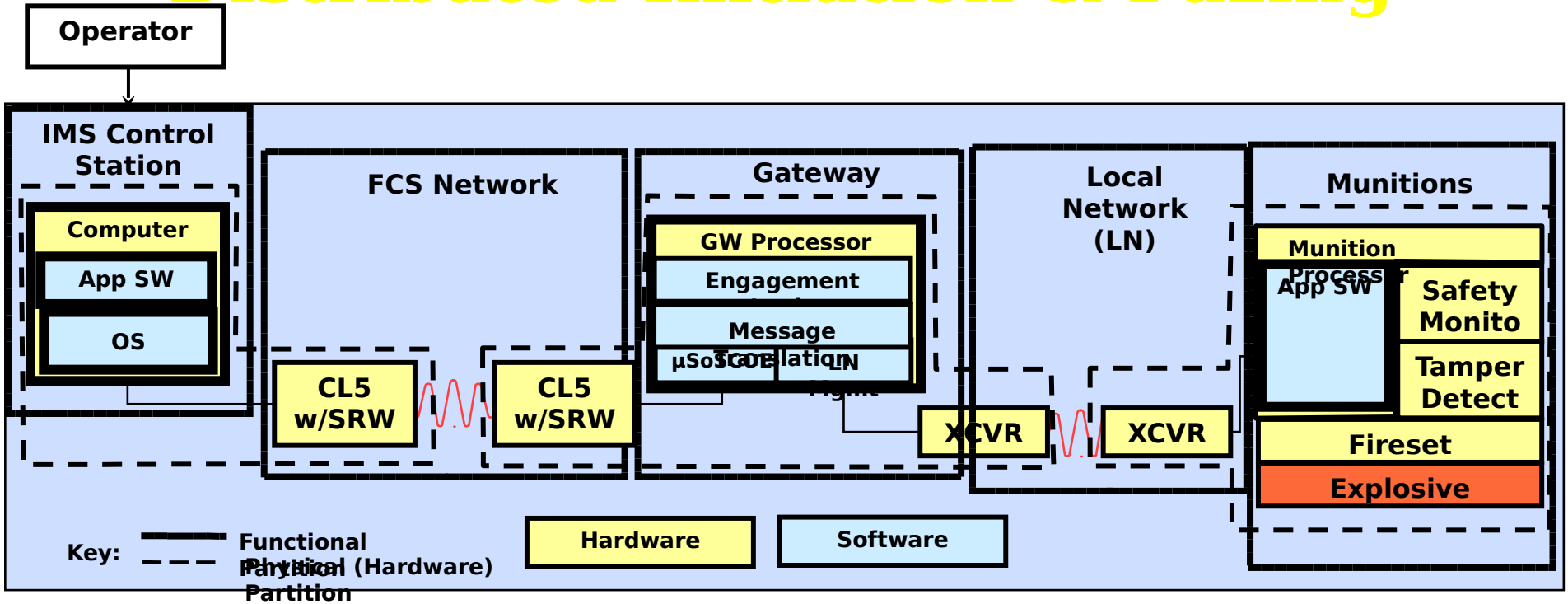
PGMM Integrated Fuze



Excalibur Integrated Fuzing



Intelligent Munitions System (IMS)
Distributed Initiation & Fuzing



- For a networked munition system, the **initiation and fuze chain** begins at the **operator** & includes any **Hardware & Software** that plays a part in creating, processing, sending & receiving a message that will either cause or enable the munition to fire.
- In addition, any Hardware or Software the plays a part in creating, processing, sending, receiving, storing, & displaying a status back from the munition that includes its armed/disarmed state is also **safety critical**.
- The Army Fuze Safety Review Board is a necessary part of this process.

Existing Production Base

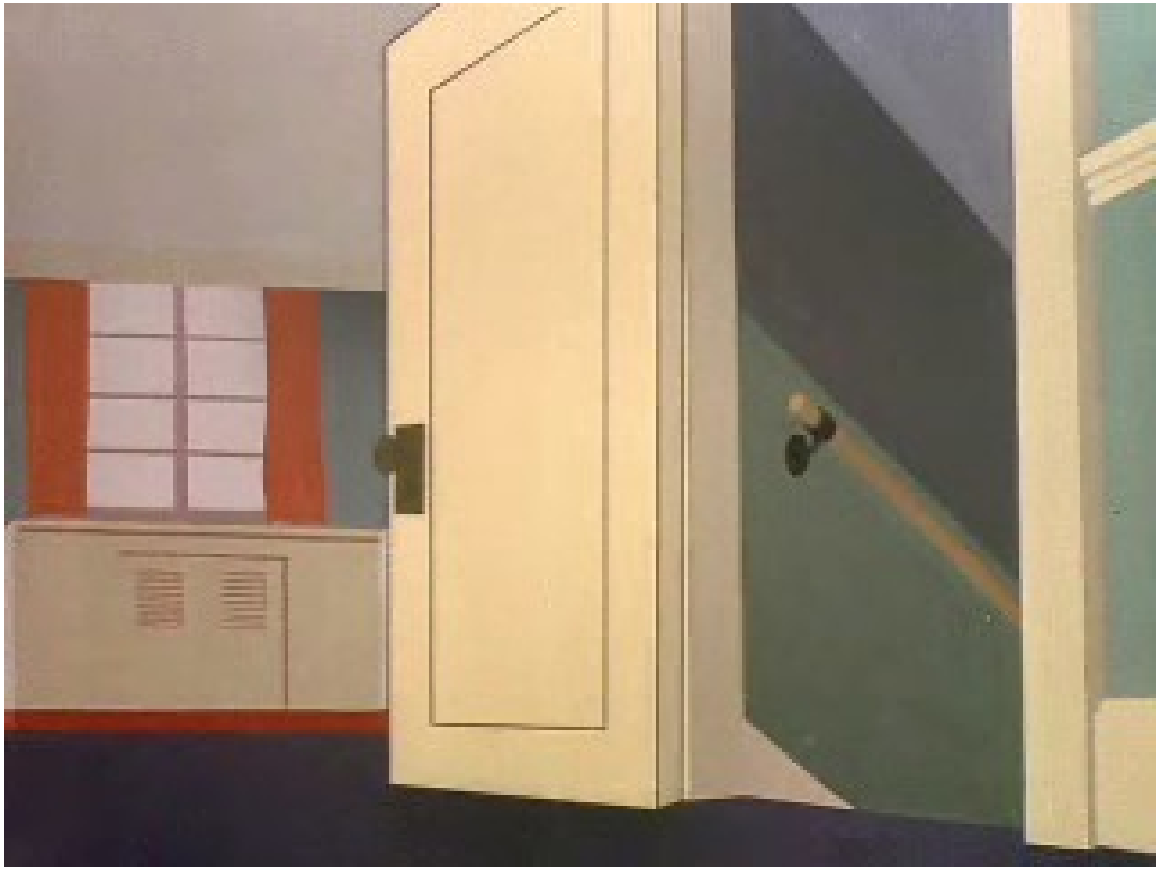
- **Do not over React/Abandon Mechanical Technology**
- **Develop Retooling Strategy for Mechanical Technology**
  - ✓ Focused on Flexible Modern Processes
  - ✓ Lower Unit Prices
  - ✓ Maintaining Quality Levels
- **Adapt to Technology Advancement**
  - ✓ System Contractor Teaming
  - ✓ Embrace Emerging Technology Innovations
  - ✓ Aggressively Pursue Next Generation Markets
  - ✓ Leverage Production Experience
  - ✓ Develop Retooling Strategy
- **Aggressively Pursue Niche Markets**
  - ✓ FMS
  - ✓ Legacy Buys
  - ✓ Cross-over Markets

Adapt or Perish

Government Agencies

- **Don’t Abandon Mechanical/Electronic Technologies**
- **Aggressively Pursue Technology Advancement**
  - ✓ Technology Development Contracts
  - ✓ Foreign Technology
  - ✓ Establishment of Fuze Technology Funding
- **Clarify/Rethink Requirements**
  - ✓ Service Safety Review Board
  - ✓ Technology Independent/Flexible
  - ✓ Responsive to Change
  - ✓ Analytics and Data
- **Anticipate and Reduce Barriers to Foreign Markets**
  - ✓ Direct Sales
  - ✓ Technology Alternatives
  - ✓ Develop Upfront Constraints Workarounds
  - ✓ Establish Process for Inventory Technology Upgrades

Safety is Job #1



Systems Contractors

- Understand Requirements/Process
- Early Service Safety Review Board Review
- Leverage Fuze Industrial Base Expertise

Respect Fuze Development Process

Questions??